

Abstract for the OSA Annual Meeting & Exhibit

Medical applications of high power laser diode arrays

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Several laser diode and solid state laser technologies developed within the Laser Program at Lawrence Livermore National Laboratory have found applications in various medical systems. Using our high average power laser diode array packaging technology and our cylindrical microlens radiance conditioning technology we have developed fiber coupled laser diode arrays for PDT and tissue welding applications. Using the same diode technologies in combination with our lens duct technology, we have demonstrated a compact 2 μm Tm:YAG diode pumped solid state laser system for use in assessing various surgical procedures.

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